When runways move but people don't: the O'Hare Modernization Program and the relative immobilities of air travel

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Abstract

This paper draws on Urry's four interconnected senses of mobility to argue that the O'Hare Modernization Project, carefully framed as *moving* runways rather than *expanding* O'Hare International Airport, has differentially affected the mobilities of people and land uses in addition to airport boundaries and noise, and that work on aeromobilities has not sufficiently considered spaces on the ground beyond airport borders. The relative immobility of the built environment around a major piece of infrastructure such as O'Hare has significant material consequences when the airport itself becomes mobile, reminding us of the politics inherent to the production of mobility systems and cities.

Introduction

Early in the "mobilities turn," Peter Adey (2006b) argued that conceiving of everything as being mobile is as unhelpful as previous conceptions of the world as predominantly immobile. What matters instead are relative mobilities and immobilities: what moves faster or slower than something else, and what the relationship is between the mobile and the relatively immobile. He draws on Urry's mobility/mooring distinction but argues that the moorings themselves are moving, too; it is only their glacial speed relative to other objects that makes them appear to be still. "Buildings, people, objects, and things can be at once moored and immobile, or indeed mobile and moored. It depends upon the relationship between them that determines how they appear and act" (Adey 2000b, p. 91). Others have argued that "airports are metastable—they are

stable in their instability" (Fuller and Harley 2005, p. 114), constantly upgrading, growing, and changing.

However, there is something to be said for taking seriously the stability of the material landscapes that are produced by air travel, as well as their effects on people who are not themselves air travelers. The built environment may change over time, can even be considered mobile, but its relative immobility counts as fixed and stable in the lives of people who inhabit that environment. While objects or complexes such as airports may in fact be mobile, the corresponding, relative immobility of other aspects of the built environment in the vicinity—roads, factories, houses—has real, material consequences for people's lives and livelihoods that have been neglected in the literature and by airport planners.

To make this argument, this article focuses on the "modernization project" at O'Hare International Airport in Chicago. Even the title of the O'Hare Modernization Project indicates the importance of mobility to its conception and development. "Modernization" was deliberately chosen over "expansion", even though the airport *is* physically expanding and *is* adding runways. However, the city of Chicago (as airport owner and operator) argues that runways are being "moved," not that new runways are being built. On the one hand, this language of relocation enables the city to claim that they are only adding one new runway when in reality they are constructing four, although a runway obviously cannot be picked up and moved across an airfield in the way that even buildings can be. On the other hand, this language illustrates the extent to which the mobility discourse is already present within public policy, and the political advantage that might accrue from using it.

The modernization project was bitterly opposed by many of O'Hare's neighboring municipalities, most of which were in place in the 1960s before the development of the airport with the advent

of jet aircraft. Once the runways have been relocated, new areas of these towns will be exposed to aircraft noise, and other areas will become quieter. The land uses within these municipalities are not mobile on the same time scale as the airport itself; entire neighborhoods cannot be moved out of the newly-noisy areas, and more compatible development cannot be moved in. The consequences for thousands of nearby residents (not counting the hundreds whose homes are being demolished for the "moving" runways) may be considerable, including negative health effects, reduced property values, and being literally or figuratively trapped indoors. Considering the built environment as mobile in relative terms therefore needs to consider the material outcomes of that relatively slow mobility, which may be longer than the lifespan of individual buildings or residents.

This paper begins with a brief review of the aeromobilities literature, focusing on the spaces and subjects created by air travel—at least within airport property and airspace—and related work on the immobilities generated by other mobility systems. The next section gives a history of O'Hare International Airport and the O'Hare Modernization Program (OMP), followed by a discussion of three kinds of relative (im)mobility of people and landscapes *outside* the airport: physical mobility of the airport's boundaries, the mobility of airport noise and thus the facility's footprint beyond its administrative borders, and changes in land uses (or the lack thereof), including residential landscapes and homes. The conclusion considers these mobilities and immobilities in light of Urry's four senses of mobility and how they are intertwined with each other in the context of O'Hare and its surroundings (Urry 2007).

Aeromobilities and immobilities

Part of the recent mobilities turn has been to consider aviation as more than a mode of transportation, but as a producer of spaces and subjects in the air and on the ground (Adey, Budd

and Hubbard 2007, Adey 2010). Airspaces are not neutral spaces for free and unfettered travel, but are restricted and delineated depending on the type of plane, its purpose for being in flight, and even at the scale of the body of the pilot (Budd 2008, Millward 2008, Williams 2011). The role of the military is particularly important in producing and consuming airspace, perhaps doubly so because that role is often deliberately shrouded (Kaplan 2006). The space of the nation-state is bound up in aviation, projected outward through displays of air power and inward through cultivating air-mindedness among citizens (Adey 2006a, 2010). National borders are therefore threatened, reinforced, and shifted through air power and surveillance, from the bilateral agreements that define which country's airlines can transport another country's citizens to U.S.-bound passengers clearing customs within a Canadian airport.

Air traffic and aviation also create new kinds of subjects, from the "million-miler" to the unaccompanied minor to the hijacker (Adey 2010, Lassen 2006). Bodies are affected in a variety of ways, from being closely surveilled (Adey 2004) or denied entry at the border, wherever that might be, to feeling the pleasures of going airborne (Budd 2011) or watching aircraft movements from the ground (Adey 2008). Not all inhabitants of an airport are travelers—there are also workers, greeters, and transients, each of whom experience the airport as a different kind of place (Cresswell 2006). Finally, there is the bird’s-eye view that only those who travel by air are able to attain and how it makes us think differently about the places we travel over (Adey 2010).

There is also the airport terminal itself, first derided as an emblematic "non-place" of transit (Augé 1995) before being reclaimed as a place with particular technologies, subjects, and modes of dwelling (Adey 2006a, Lloyd 2003). Airport spaces are tightly controlled and increasingly commercialized, and yet for many frequent travelers, they are also familiar spaces or even workplaces. Others have argued that while airports have become more like cities, with shopping,

lodging, and other services contained within, we are now seeing cities becoming more like airports, particularly when it comes to surveillance and the sorting of populations into those who belong and those who do not (Adey 2004, Fuller and Harley 2005, Sheller and Urry 2006). Adey (2006b) has also used airports as an example of how there is no such thing as immobility, only "mobilities we mistake for immobility." He advocates considering *relative* immobility as seen in the long-lasting but ever-changing structure of airport terminals and considering the politics involved in establishing and maintaining these differential (im)mobilities.

The relationship between mobility and (relative) immobility is relevant to more than air travel, of course. Hagman (2006) points out the flipside of automobility in two different aspects of undesirable (im)mobilities: traffic congestion and parking. "We have been promised that we would be able to *go* wherever we want whenever we want, which, of course, should also include the right to *stop* wherever we want" (Hagman 2006, p. 69-70). Because automobility has become the dominant system of travel throughout most of the Western world, other people often want to make use of this system in the same times and places as we do. This leads to unwanted stoppage on the road as we wait in traffic and unwanted motion on city streets as we circle the block looking for a parking space, both sometimes leading to considerable frustration.

The immobilities generated by a particular mobility system can also be considered more broadly. The way the built environment is constructed inevitably privileges one mode over another, reinforcing the dominant mobility system through the physical arrangement of space and structures as well as its inhabitants' practices (Henderson 2009). Those who are excluded not only from the dominant mobility system but from the planning of that system are doubly disadvantaged in experiencing the negative effects over the positive ones while not being able to exert any influence:

> "the elites are increasingly tourists who master the possibilities of mobility successfully and to their own satisfaction. The excluded are, on the other hand, pushed around, without resources to master the challenges of a mobile world. Their lives are defined on the premises of others' mobility and they are increasingly pushed aside, reduced to living with the side effects that others' mobility causes" (Fotel 2006, p. 733).

This consideration of how elite mobilities produce side effects in excluded populations is one of the gaps that remains in the aeromobilities literature in particular. Furthermore, there has been little to no recognition of the spaces of air travel that exist on the ground outside of the airport boundary or even the terminal (though see Faburel 2003, Faburel and Maleyre 2007). For example, what of the massive ground transportation infrastructure that supports arrivals and departures, including roadways and transitways? What of the transient-yet-stable landscapes outside airport property but produced by airport activity, beyond flex office space and business hotels to include parking lots, high-priced gas stations, boarded-up houses, and strip clubs? The affected bodies of airport neighbors who lose sleep, are distracted in their classes, or experience higher rates of cancer or asthma are likewise missing. Finally, the airport terminal may be where air travel is grounded (Adey 2010), but the mobilities approach to the ground components of air travel has largely stopped at the terminal exit, when in fact the daily and long-term mobilities of residents and workers surrounding airport property can be severely affected by airport operations, plans, and expansions (Arputham and Patel 2010, Faburel 2003, Himmelberger 2010, Negrey et al. 2011). It is these gaps that this paper moves towards filling.

This movement is made through following Urry's call for considering mobilities in concert, found alongside and affecting each other in a variety of ways (Urry 2007). He discusses four

different senses of mobility. First, something moves or is capable of it, including both what Cresswell might term movement (the motion itself, without meaning) and mobility (movement with a meaning attached to it) (Cresswell 2006). Second is the formation and actions of mobs or multitudes. Third is social mobility, a long-standing concept that is tied to physical mobility in a variety of ways. Finally, there is migration or other long-term, semi-permanent movement. This paper considers the these in terms of how they interact with and reinforce or contradict each other in the case of the O'Hare Modernization Plan.

From Orchard Field to the OMP

Chicago has a long aviation history, beginning with one of the first government airmail contracts to New York on what would later become United Airlines (Graham 1995). By 1931, Chicago Municipal Airport on the city's Southwest Side, today known as Midway, was already the busiest airport in the world in terms of passengers (Doherty 1971). Chicago housed a number of military installations during World War II, including the Douglas Aircraft Plant that produced C-54 transport planes. Before the war was even over, plans were underway to reuse the airfield that was adjacent to the plant, known as Orchard Field (thus the ORD on today's luggage tags). The first commercial flight at what would become O'Hare International Airport took place on October 23, 1946. Chicago eventually annexed the airport at the city's northwestern boundary via a strip of land no wider than a two-lane road, meaning that the airfield itself is completely surrounded by suburban municipalities while remaining under the control of Chicago's Department of Aviation.

As late as 1957, Midway was still the world's busiest airport, but once jet aircraft became available in 1959, Midway's runways were too short. Surrounded by residential development, there was no room to expand the airfield without demolishing hundreds or thousands of houses.

Runways could be extended at O'Hare, however, which was then at the fringe of suburban development, and jets followed quickly. In the fall of 1959, United switched half of its flights to O'Hare, and by July 1962, Midway had no scheduled commercial flights. Chicago's airport had moved across town. At the dedication ceremony, President Kennedy noted that "No great airport is really ever 'complete,' and I am sure Chicago-O'Hare will never be finished" (Doherty 1971, 270).

After becoming the world's busiest airport, O'Hare was soon facing complaints from its neighbors, primarily about noise. When land was acquired for Orchard Field, jet airplanes had not yet been invented; even after the conversion to a civilian airport, jets were not in use as commercial airliners for over a decade. Since O'Hare was built at what was at the time the edge of the developed metropolitan area, housing and other development filled in around it throughout the 1950s (Cidell 2004). By the time the first jet flew into O'Hare in 1959, residential development was already in place in many neighboring municipalities that were unaware of the increase in noise that jet technology would bring (Cidell 2006b). By 1965, there were an estimated 300,000 people seriously affected by airport noise (NIPC 1971). Furthermore, only four years after O'Hare's official dedication, the airport was so crowded that the city commissioned a study for a third major airport. Without consensus on a new site, runways were added in 1967 and 1971 to the south and west, taking additional land and housing from neighboring municipalities through Chicago's power of eminent domain.

As decades went by with steady increases in traffic and noise at O'Hare, nearby residents grew increasingly vocal. Chicago requested that the area adjacent to the airport be rezoned to keep land uses compatible; the suburbs said this "was comparable to taking 330 square miles of land in the area without compensation" (Doherty 1971, 331). In the early 1980s, a number of lawsuits

were filed over damages to property values, all of which were turned down (Wingert 1985). When Chicago proposed conducting a study to obtain federal funds for soundproofing, some municipalities protested out of fear that having their housing identified as being in a noisy location would lower property values (Mehler 1986). But the study was eventually conducted, and residents slowly began to receive some relief in the form of soundproofing.

After a 1989 proposal for two more runways met with strong opposition, Mayor Richard M. Daley issued a plan for a third major airport on the southeast side of the city. The plan was presented as a *fait accompli*, but pressure from the thousands of residents whose homes and jobs would be lost, environmentalists who feared the loss of wetlands around Lake Calumet, questions of the Mayor's cost estimates, and the likelihood that the airport would be run by a state-wide commission and not the City of Chicago forced Daley to withdraw the plan in 1992 (Washburn 2002). Daley's introduction of the O'Hare Noise Compatibility Commission in 1996 allowed municipalities the opportunity to participate in the planning process for noise mitigation and abatement, both in terms of soundproofing and in decreasing noise at its source. Nevertheless, a number of towns remained firmly opposed to the airport, reluctant to trust any group organized by Chicago, and formed the Suburban O'Hare Commission to oppose any expansion plans (Cidell 2004).

It was in this context that the O'Hare Modernization Program was put forth. After a decade of insisting that no new capacity was needed in the Chicago aviation system, Mayor Daley announced in 2001 that new runways were needed urgently at O'Hare. Because of O'Hare's prominent role in the hub-and-spoke system of United and American Airlines, delays were affecting the entire nation's air transportation system, leading to calls from various U.S. Congressmen for a solution (specifically, Congressmen from Iowa who connected through

O’Hare on their journeys home (Schmeltzer 2001)). Daley's proposal for expanding O'Hare was announced in early 2002 as the addition of a single runway and the "relocation" of three others. This proposal was deliberately framed as *modernization* rather than *expansion* to reduce the fears of nearby municipalities that Chicago was going to take away more of their land.

Despite the project's name, staff and elected officials in those municipalities understood the rhetoric as a play on words:

> “Now, technically this is a modernization, not a—you know—and when somebody [from Chicago] called and said there's only going to be one new runway, that's wonderful. Until I realized they weren't taking into account the ones that were being turned! Which to us are going to be new runways because they're going to affect new areas.” (Norridge Village Clerk, interview in 2002)

> “They talk about moving runways. You can't move runways! You don't move runways! You move cups of coffee [demonstrates], you don't move runways.” (Elmhurst Mayor, interview in 2002)

> “So that is with the expansion of O’Hare…I am not supposed to say expansion, I am supposed to say OMP, the O’Hare Modernization Program…” (Schiller Park Community Planner, interview in 2011)

Runways may be mobile in the sense that their material is replaced over the course of years, much as airport terminals are torn down and rebuilt (Adey 2006b), but that is not the sense in which the city of Chicago presented them. The OMP would result in six parallel east-west runways, after the removal of two parallel northwest-southeast runways and one short north-south runway from the days of Orchard Field, plus the retention of two northeast-southwest

runways (Figure 1). The goal is to enhance the airport's capacity to handle large volumes of traffic even in bad weather, a frequent problem in a region prone to both snowstorms and thunderstorms. Other parts of the plan include a new access road from the western side of the airfield and possibly a new terminal on that side, improvements to the current eastern access road, and a possible extension of the rapid transit Blue Line to the western suburbs beyond its current termination at the airport. As of mid-2012, funding has been secured for three of the four new runways and the western access road; the other projects are still unfunded.

Moving (and not moving) people

Because of the controversy over the OMP and Chicago's reluctance to release the details of its plan to the public, including the precise final alignment of the runways, there was a great deal of uncertainty and speculation in neighboring communities over what was going to happen during the early 2000s. The comments below (and above) are taken from interviews with city staff and/or elected officials in suburban municipalities adjacent to O'Hare, some conducted in 2002 and some as follow-ups in 2011, to illustrate three mobilities affected by the OMP and affecting neighboring residents and businesses: mobile airports, noise, and land uses.

First, there is the extent to which the airport itself has moved or become mobile. Physically, it has expanded outward with the acquisition of land in three municipalities, including six hundred homes and 1/3 of the land area of the village of Bensenville, at the southwest corner of airport property. While Bensenville and other municipalities fought the airport’s expansion in court, development in these communities slowed or stopped because of the uncertainty over whether expansion would eventually happen. The village argued for years that residents should not have to sell their homes to Chicago, making it “the first government entity in the history of the United States to urge resistance to eminent domain” (Ryskamp 2005, p. 205). The current village

president of Bensenville, elected in 2009 in large part out of residents' frustration over the ongoing uncertainty, has noted that a 2008 *Forbes* magazine list of “dying cities” included his town as one of few that was not part of the auto industry. While the municipality has since moved its borders inward, there is now a limit on that movement, which means city staff can plan for future development and redevelopment to improve the declining quality of life of their residents, at least those who did not have to leave because of the airport expansion:

> “That's about 15% of our housing stock. It is to the best of our knowledge the largest neighborhood of affordable housing in [suburban] DuPage County. There is a significant minority population living in that area, and one of the arguments that's used is, well, these people are going to get paid for their homes, so what. Well, I would contend that most of those folks will not be able to take that check, however large it is, and buy comparable housing anywhere else.” (Bensenville Village Manager, interview in 2002)

There are nearly 500 households who will be moving within or out of Bensenville as 600 homes and businesses are demolished (Hilkevitch 2009). This loss of housing due to airport expansion is hardly unique to O’Hare; Louisville (Negrey et al. 2011), Mumbai (Arputham and Patel 2010), and Boston (Cidell 2004) are only a handful of examples of forced residential mobility with or without adequate compensation and/or warning. This relocation may occur from the need for physical space for runways or terminals, or it may be due to buffer space off the ends and edges of runways that has to be kept clear of any structures or obstacles in case of engine failure on takeoff, another way in which “airspace” extends beyond the body of the aircraft (Budd 2008).

While the direct taking of land and residences was of concern to adjacent municipalities, a bigger issue was airport noise. Aircraft noise is modeled and mapped into contours that average noise

over a 24-hour period (weighting late-night flights more heavily), producing a visualization similar in appearance to a topographical map (see Figure 2 for an example around O'Hare). The model takes into account the type of aircraft, their typical approach and departure patterns, and their frequency. The revised runway configuration would expose new areas to aircraft noise which did not previously directly experience it, especially neighborhoods to the immediate east and west of the airport's northern and southern edges. This includes Elk Grove Village, the one municipality bordering O'Hare that was able to partially plan its land uses in the 1960s to keep housing out of the noise contours by locating industrial development adjacent to the airport and residential development in the western half of the village. With the new runway configuration, more flights will land over the village, effectively extending the noise contours over some of this residential land.

Aircraft noise has been shown in repeated studies to have a negative effect on property values, roughly half a percent for every decibel-contour (Espey and Lopez 2000, Jud and Winkler 2006), although this may be offset for some residents by increased accessibility to jobs (Tomkins et al. 1998). This leads to the third effect of the OMP: not only forcing some people to move from their homes, but making it more difficult or impossible for others to do so. The revised runway configuration and resulting noise contours will likely lower property values in some municipalities (though presumably raise them in others which are no longer in the flight paths):

> "We believe the airport expansion will mean an initially, a 10% [loss of property value], and this is as a result of consulting economic experts, and city planners, and appraisers: one of my aldermen is a nationally known appraiser who keeps me informed about threats to our tax base. A 10% reduction in our property taxes,

> we estimate, would be worth one hundred *million* dollars, in assessed valuation" (Park Ridge Mayor, emphasis in original, interview in 2002)

Combined with the recession, this would make it difficult for residents who now want to move to be able to do so. The connections between airport noise and health are less clear, although there is strong evidence that sleep patterns and concentration are disrupted and that quality of life and health are reduced (e.g., Black et al. 2007, Hume 2010, Schreckenberg et al. 2010). Schools and homes within a certain noise contour (the 65 Day-Night Level (DNL), or 65 decibels averaged over a 24-hour period) are eligible for soundproofing funded by passenger fees, although this is obviously only useful for residents and schoolchildren who are inside with the doors and windows shut. Airport neighbors have observed feeling trapped in their homes as a result of soundproofing projects, insisting that without living the experience, airport planners and others cannot understand what it is like and that soundproofing is not a complete solution (Cidell 2006a).

The more reliable solution to airport noise pollution is to keep the land uses within the 65 DNL compatible with airport operations—to make land uses mobile as airports and their noise footprints are. However, most communities around O'Hare were developed before or at the same time that the airfield was being converted from a military to commercial facility, and more importantly, before jet aircraft. Even if jets did not make the airport physically expand, they increased the noise contours significantly, placing around 300,000 people in the "incompatible" zone who were actually living there first (despite the commonly heard criticism that "you knew there was an airport there when you moved in"). And, as the OMP demonstrates, airports clearly can move. As planners from adjacent communities pointed out on the issue of land compatibility:

> "Our land use is basically pretty much determined, you know you've got rows and rows and rows of brick ranches. You know, that's not going anywhere. Your industrial base, you know, you may lose one or two homes or factories, but it's not like you can really come through it and assign land uses compatible with the airport. If I was waving a magic wand and planning this all from the start, would I put homes north of Lawrence Avenue? Absolutely not. That should be an industrial area…where the industry is, is one of the quieter areas; that's where homes should be, in some regard." (Schiller Park city planner, interview in 2002)

> "When you have a town that's basically been platted and developed prior to the airport, you really can't *do* much…I suppose you could go back and say, well, near the airport you oughta have commercial [development] because the noise impacts are less and it's easier to build an office building with thick windows and lots of insulation as opposed to single-family homes. But you know, in retrospect, or doing backtracking, I think it's very difficult." (Park Ridge city planner, emphasis in original, interview in 2002)

It is true that land uses change over time: residential development moves in or out of certain areas, commercial development expands and contracts as the local market changes, etc. However, if airports move slowly, other land uses are mobile on an even slower time scale. The amount of money necessary to redevelop even a block of housing into commercial or office development—assuming all residents on that block are willing and able to move elsewhere—is immense, and finding new establishments to occupy the redeveloped area is by no means guaranteed.

This is not to say that land use change is not occurring around O'Hare. Particularly to the south, where large structures used to house manufacturing operations that have since moved elsewhere (part of the reason for the decline of cities like Bensenville), major logistics operations such as FedEx are taking advantage of the large square footage and good transportation access, by road and rail in addition to air. A former television factory will become a home for a Microsoft server facility because of the existing electrical capacity (Interview, Schiller Park, 2011) as part of the general transformation of this area from manufacturing to producer services. For the most part, however, these changes have been driven by factors only tangentially related to the airport, and not to do with the OMP:

> "[A]t one time you worked at the International Harvester in Melrose Park or you worked at Automatic Electric or you worked maybe at Western Electric in Cicero; back when I was growing up, everybody worked in a factory. They were tradesman, but that has all changed and those jobs are just gone and they are not coming back… the availability of the land, as these industrial things got knocked down, the proximity to the highways and the airport, I think our location just sold itself, so we really didn't have to do too much." (Northlake mayor, interview in 2011).

Conclusions: relative immobilities and their material consequences

To return to John Urry's multiple forms of mobility, the O'Hare Modernization Project demonstrates how these forms are intertwined once we look beyond the borders of airport property and take seriously the material effects of this "mooring" of global mobility. First, while it might seem odd to consider an airport as being mobile in the literal sense, that has clearly been the case in Chicago: first in the move from Midway to O'Hare, and later in the expansion of

airport land and the addition and reconfiguration of runways. However, the titling of the project as “modernization” and explaining it as moving runways rather than building new ones emphasizes the desire to downplay the physical changes on airport property and its surroundings by relying on a discourse of mobility. In other words, the city of Chicago is adopting Adey’s notion that airports are not fixed, immobile infrastructure in order to minimize the apparent material effects of the OMP. Furthermore, in enabling different patterns of aircraft movement to encourage a faster through-put, the OMP also changes the component of the aeromobility system that is most relevant to non-travelers (Fotel’s “excluded”): noise. Shifting noise contours take the airport off-site in new and different ways for nearby residents, schoolchildren, and workers.

The mobilization of people as activists is present here as well. The O’Hare Noise Compatibility Commission was created to give suburban municipalities some voice in airport operations, if not always as much as they would like, and has had some success in changing daily airport operations to minimize the effects of noise. The corresponding Suburban O’Hare Commission fought the OMP through lawsuits for over a decade, slowing and reshaping the project but also contributing to declining development within its members’ borders. Ironically, it may be the residents of the Chicago neighborhoods newly affected by airport noise who have the least voice, because their municipality’s official position is fully in favor of the airport, and the airport itself is managed by an internal city department.

Another of Urry’s categories, that of social mobility, is clearly tied to both movement and mobilization. For one, there is the upward mobility of air travelers who rely on fast and frequent connections as part of their daily work (Lassen 2006). One of the strongest arguments put forth for the OMP by local business organizations was O’Hare’s role as the “economic engine” of the region, contributing to job stability and growth not only in the immediate vicinity of the airport,

but dozens of miles away. At the same time, uncertainty over the future of the OMP has contributed to downward social mobility in some neighboring communities as development slowed or stopped. The general transition in the area from a manufacturing-based economy to one relying on producer services, while not directly related to the airport, nevertheless constrains the social and spatial mobility of residents.

Finally, migration and relocation are clear side effects of the OMP. The connections to social mobility are clear, particularly for the nearly 500 households in Bensenville forced to relocate from a rare pocket of affordable housing in the western suburbs. On the other hand, retaining or attracting corporate headquarters to Chicago has become easier with the promise of reduced delays at O'Hare: for one, Boeing moved from Seattle to downtown Chicago in 2001, bringing top executives with them. Local relocation of businesses is also relevant: the recent influx of logistics-related firms is related to the airport, but also to good road and rail connections. However, the shifting land uses that are incompatible with airport operations are not accomplished as easily as moving runways. The migrating noise contours are now affecting neighborhoods and towns which previously did not have this problem. While soundproofing might bring some relief, residents will still be forced to stay indoors if they want to enjoy quiet.

Municipalities and land uses around the airport may only be *relationally* immobile as compared to the airport itself (Adey 2006b). However, this relational immobility has a variety of economic, social, and environmental effects for individuals as well as communities that have been neglected in airport planning and academic writing. It may well be correct to say that O'Hare is more mobile than the airplanes that moor there, given that after new runways have been built and noise contours shifted, flight tracks will remain relatively fixed. At the same time, the fact that runways can move across airport property or even across the city as a whole contradicts the

common argument of airport proponents that nearby residents knew the airport was there when they moved and therefore have no right to object to the noise or to influence airport operations.

This argument is not politically neutral: "the politics of mobility is not just about movement, but how cities are organized and configured—and for whom" (Henderson 2009, p. 87). About half of the commercial airports in the U.S. are owned and operated by city or county governments, and about half by regional authorities. The extent to which affected residents can influence airport planning thus varies considerably, though the demands of elite travelers are likely to outweigh the demands of excluded airport neighbors. Were airport privatization to advance in the U.S. the way it has in Europe, Asia, and Oceania, the influence of elites might further grow. Therefore, scholars of mobility and transportation, as well as planners and elected officials in airport-operating and airport-adjacent communities, should consider the relative ability of various components of the built environment to be mobile over different time spans—and the material consequences of that relativity outside of transportation infrastructure itself—in the interest of mobility equity.

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